

Application Number 10/508,914  
Amendment dated February 10, 2006  
Response to Office Action of November 14, 2005

**Remarks/Arguments**

Applicant acknowledges with gratitude that Examiner has indicated that claims 1 – 16 contain allowable subject matter.

**Claim objections**

**2. Claims 1-16 are objected to under 37 CFR 1.75(c)**

Claims 1-16 are objected to under 37 CFR 1.75(c) as being in improper form. Applicant has amended the claims so that they are dependent only on claim 1.

**3. Claim 11 is objected to under 37 CFR 1.75(c)**

Claim 11 is objected to under 37 CFR 1.75(c) as being of improper dependent form. Applicant has cancelled claim 11 from the application.

**4. Claims 19 and 20 are objected to**

Claims 19 and 20 are objected to since Examiner is of the opinion that “electromagnetic radiation” is not the kind of “radiation” from an “ion beam” or “e-beam”. Applicant refers Examiner to Niels Bohr’s 1927 Principle of Complementarity, whereby every photon, every electron, every ion, has both wavelike and particle properties, and therefore an “ion beam” and an “e-beam” are electromagnetic waves, and therefore, the ‘electromagnetic radiation’ is an apt descriptor unalloyed even by a treatise filed as recently as November 10, 2004 (the ‘298 reference).

**5. Claims 1-16 are objected to**

Claims 1-16 are objected to since Examiner is of the view that what is being claimed is properly called a “structure” of “materials” rather than “a material” comprising structural features.

Applicant disagrees, since the effect of the indented surface is to alter the properties of the metal, and therefore what is being claimed is a material.

**Claim Rejections – 35 USC § 102**

**7. Claims 17-18 and 21-24 are rejected under 35 USC 102(b)**

Claims 17-18 and 21-24 stand rejected under 35 USC 102(b) as being clearly anticipated by Hunter Jr et al. (US 5,660,738) such as in the upper block of Fig. 3 per col. 5, since Examiner is

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of the opinion that the preambles of claims 17-26 are not given significant patentable weight in accordance with MPEP 2111.02, and only steps(a) to (d) are treated as having significant patentable weight.

First Applicant refers Examiner to 55 F.3d 615, 620, 34 USPQ2d 1816, 1820 (Fed. Cir. 1995), which makes it clear that: "If the claim preamble, when read in the context of the claim, recites limitations of the claim, or, if the claim preamble is 'necessary to give life, meaning and vitality' to the claim, then the claim should be construed as if in the balance of the claim". Clearly the preamble to claim 17 recites a number of limitations, viz: surface roughness, indent width and indent depth that give the claim 'life meaning and vitality'.

Secondly, Applicant refers Examiner to 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989), from which it is to be understood that any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation. Clearly the preamble to claim 17 recites a number of such limitations, viz: surface roughness, indent width and indent depth.

Thus, the present claim 17 cannot be understood to be anticipated by Hunter, because each and every element as set forth in the claim is not found, either expressly or inherently described, in the reference [see 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)]. Specifically Hunter does not teach a process for creating on one surface of a substantially plane slab one or more indents of a depth approximately 5 to 20 times a surface roughness of said surface and a width approximately 5 to 15 times said depth, nor does Hunter teach that the indents should be at a substantially 90 degree angle to said surface, as is required in the present invention. Furthermore, the disclosure in an assertedly anticipating reference must provide an enabling disclosure of the desired subject matter; mere naming or description of the subject matter is insufficient, if it cannot be produced without undue experimentation [see 346 F.3d 1051, 1054, 68 USPQ2d 1373, 1376 (Fed. Cir. 2003)].

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**Claim Rejections – 35 USC § 103**

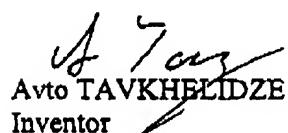
**8. Claims 19-20 and 25-26 stand rejected under 35 USC 103(a)**

Claims 19-20 and 25-26 stand rejected under 35 USC 103(a) as being unpatentable over Hunter.

In view of the comments above relating to claim 17, the 35 USC 103(a) rejection of claims 19-20 and 26-26 should be withdrawn.

In view of the foregoing, Applicant respectfully submits that this application, as amended, is in condition for allowance, and such disposition is earnestly solicited. If the Examiner believes that discussing the application the Applicant over the telephone might advance prosecution, Applicant would welcome the opportunity to do so.

Respectfully submitted,

  
Avto TAVKHELIDZE  
Inventor